Author’s response to reviews

Title: Short GSM mobile phone exposure does not alter human auditory brainstem response

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Author’s response to reviews: see over
Dear BioMed Central Editorial Team,

Please find enclosed the revised version for manuscript (MS) entitled:

Stefanics G., et al.: **Short GSM mobile phone exposure does not alter human auditory brain stem response.**

Thank you for considering our data of interest for BMC Public Health. We revised the MS in line with the comments and suggestions of the referees. We attached a list of modification and corrections made to the MS to this letter. We hope that our revised MS is now suitable for publication in the BMC Public Health.

We are looking forward to receiving further comments on our data.

Sincerely yours,

Istvan Hernadi
Response to the BioMed Central Editorial Team’s comments

- Authors' affiliations are now given in the required format.
- The Acknowledgements section is now complemented according to the Reviewers’ suggestions (page 11, line 22.).
- The language of the MS is now corrected by the assistance of a native English speaking colleague.
- Written consent was obtained from study participants. It is stated in the Methods section of the revised MS (page 5, line 22).

Response to Mariola Sliwinska-Kowalska

- The aim of our current study was not to replicate exactly our previous pilot study. The protocol of the current study was different from that of the previous one. We stated in the revised MS that we adhered to the protocol of the GUARD project. In the current study, we administered 10 min of irradiation, whereas in the previous study the irradiation lasted for 15 minutes. This means that the energy absorbed in the head of the subjects in the current study was only 2/3 of that of the previous study. The shorter irradiation time may also account for our current negative findings. On the other hand, in the previous paper, the number of participants was 10, while it is 15 in the current study providing a higher statistical power for the current study. The Discussion section has been amended accordingly, highlighting these differences between the current and the previous paper from our group.
- We used a Nokia 6310 mobile phone. The type of the phone is corrected in the Methods section of the revised MS (page 2., line 13.).
- The stimulus rate was 27 Hz. It has been corrected in the revised MS (page 6, line 3.).
- The Discussion section of the MS has been corrected according to the Reviewer’s major remark (page 9., line 14.).

Response to Yoshikazu Ugawa

- Our ABR peak latency data are in accordance with the normative data of adults (ref: “Evoked Potentials in Clinical Medicine”, Chiappa, Keith H., 2nd edition, Raven Press, New York, 1990) for both peak latencies (DATA) and standard deviations (DATA). The average latency and standard deviation of wave I in our data, are also in line with data from other studies published previously in the field (REF). For this reason we believe that, the quality of our data would not prevent us to make correct judgments about central nervous system functions. On the other hand, the response of hair cells in the cochlea, (cochlear microphony, CM), is also clearly visible in our recordings (in the “rarefaction” and “condensation” conditions) indicating that the quality of our recordings are acceptable. We believe that, though CM potentials preceding wave I may account for the visual judgment of smaller amplitudes
for wave I the consistency of our latency data indicates that the peak detection was correct.

- The aim of our current study was not to replicate exactly our previous pilot study. The protocol of the current study was different from that of the previous one. We stated in the revised MS that we adhered to the protocol of the GUARD project. In the current study, we administered 10 min of irradiation, whereas in the previous study the irradiation lasted for 15 minutes. This means that the energy absorbed in the head of the subjects in the current study was only 2/3 of that of the previous study. The shorter irradiation time may also account for our current negative findings. On the other hand, in the previous paper, the number of participants was 10, while it is 15 in the current study providing a higher statistical power for the current study. The Discussion section has been amended accordingly, highlighting these differences between the current and the previous paper from our group.

- In our present study, participants were assigned randomly either in a group receiving genuine or in a group receiving sham irradiation. The two groups (GENUINE vs. SHAM) and the different ABR waves (I-V) were handled separately in the statistical comparisons. As the null hypothesis of the t-test is that the difference of the „before” and „after” conditions is not different from zero, possible correlation among latencies were not considered relevant in our statistical model.